REMARKS

One paragraph of the specification has been amended to correct the frequency of the clock that is coupled to the 68331 microcontroller. The 68331 microcontroller is made by Motorola Inc. as explained on page 67, lines 6 and 7 of the application as filed. Those skilled in the art will appreciate that the clock frequency for a Motorola 68331 microcontroller is 32.768 kHz, not 32768 kHz. In fact, the data sheet pertaining to the Motorola 68331 microcontroller, which is readily available on the Internet or from Motorola Inc., specifies that operation with a 32.768 kHz clock is standard. Also, in the last line of the amended paragraph, a space has been added between "15" and "pF."

Several amendments have been made to the drawings. These amendments are shown in the accompanying Replacement Sheets and also in the Annotated Sheets Showing Changes which are attached hereto as Appendix A. It is noted that the set of drawings mailed on December 27, 2001 along with the RESPONSE TO NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION had some handwritten notes thereon pertaining to some of the drawing corrections being made by this Amendment. Due to the large number of drawing sheets in this case (i.e., 180 drawing sheets), neither Applicants' attorneys nor the Patent Office noticed this inadvertent oversight. Applicants' attorneys intended to make the corrections that were indicated on the drawings by the handwritten notes in response to the first Office Action not in the RESPONSE TO NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION.

Figs. 56 and 58 have been amended to change the word "where" to "were" to correct the typographical error in each of these Figs. In Fig. 62E, 32768 kHz is replaced by 32.768 kHz to match the correction made to the specification. In Fig. 62G, a missing line segment to connect up to capacitor C49 has been added. In Fig. 62H, a line has been added atop CS10 on the pin 10 designation and QSO has been replaced by DSO on the pin 77 designation. In Fig. 62I, the pin 69 designation has been changed from PSC0/SS/PQS3 to PSC1/PQS4, the pin 68 designation has been changed from TXD\PQS7 to PSC0/SS/PQS3 (with a line above the SS), and the pin 75 designation has been changed from ADDR0 to TXD/PQS7. In Fig. 62R, a line has been added over VFD_CE. In Fig. 63F, MEMA (with a line thereover) has been replaced by MEMR (with a line thereover). In Fig. 64M, a line segment connecting up the output of the lowermost amplifier (designated as U29) with the associated node has been added. In Fig. 66 J, "M SO" has been replaced with MISO.

The Examiner rejected claims 1-139 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Pat. No. 6,421,571 to Spriggs et al. and U.S. Pat. Application Publication No. 2002/0020444 A1 to Dickerson, JR. et al. Submitted concurrently herewith is a Declaration Under 37 C.F.R. § 1.131 to antedate (i.e., swear behind) U.S. Pat. No. 6,421,571 and U.S. Pat. Application Publication No. 2002/0020444 A1, thereby overcoming the Examiner's rejection. Accordingly, claims 1-139 are in condition for allowance and such action is respectfully requested.

With regard to the Office Action mailed June 27, 2003, Applicants point out that the Examiner's statement that, "[a]t this point in the office action, the remaining independent claims 75, 100, 112, 120, 123, 124, 130, and 137 are obvious over the combination of Spriggs and Dickerson as set forth above," which appears on Page 5 of the Office Action, fails to make out a prima facie case of obviousness regarding these claims because independent claims 75, 100, 120, 123, 124, 130, and 137 have different limitations than the two independent claims (i.e., claims 1 and 27) to which the Examiner applied the cited art. The Examiner makes no attempt to explain how the cited references are being applied to the limitations that actually appear in claims 75, 100, 112, 120, 123, 124, 130, and 137. Furthermore, with regard to independent claim 27, the Examiner's explanation for making the rejection is that "gas monitoring is suggested in Dickerson." This statement does not make out a prima facie case of obviousness with regard to claim 27 because it does not even mention the actual claim limitations appearing in claim 27, let alone identifying how the cited references, in combination, teach or suggest all of the claim 27 limitations. In addition, the Examiner paraphrases many of the dependent claims in a manner inconsistent with the language that actually appears in these claims. It is respectfully requested that, in the event that the Examiner makes any claim rejections in any future Office Actions, a more thorough explanation of the basis for the rejection(s) be provided to assure that the prior art reference (or references when combined) teach or suggest all of the claim limitations which, among other things, is required in order to make out a prima facie case of obviousness.

If there are any questions or comments that would speed prosecution of this patent application, the Examiner is invited to call the undersigned at (317) 231-7341.

It is respectfully requested that, if necessary to effect a timely response, this paper be considered as a Petition for an Extension of Time sufficient to effect a timely response and that shortages in fees, if any, be charged, or any overpayment in fees credited, to the Account of Barnes & Thornburg, Deposit Account No. 10-0435 with reference to file 7175-68263.

Respectfully submitted,
BARNES & THORNBURG

Ronald S. Henderson

Ronald S. Henderson
Attorney Reg. No. 43669

Indianapolis, Indiana
317-231-7341
INDS02 RSH 605148v1

AMENDED SHEET SHOWING CHANGES

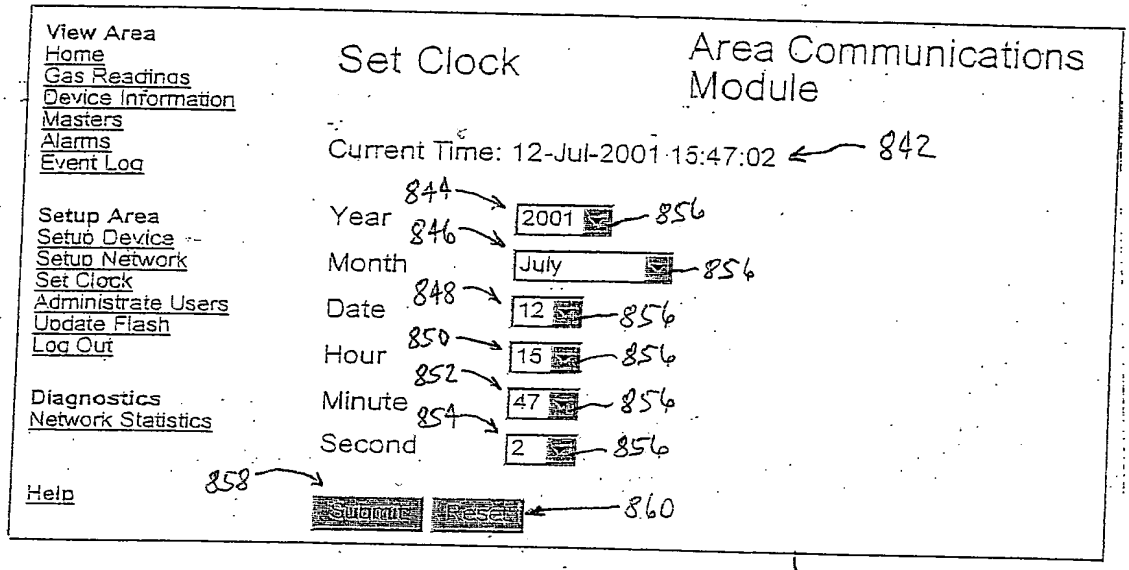


Fig. 55

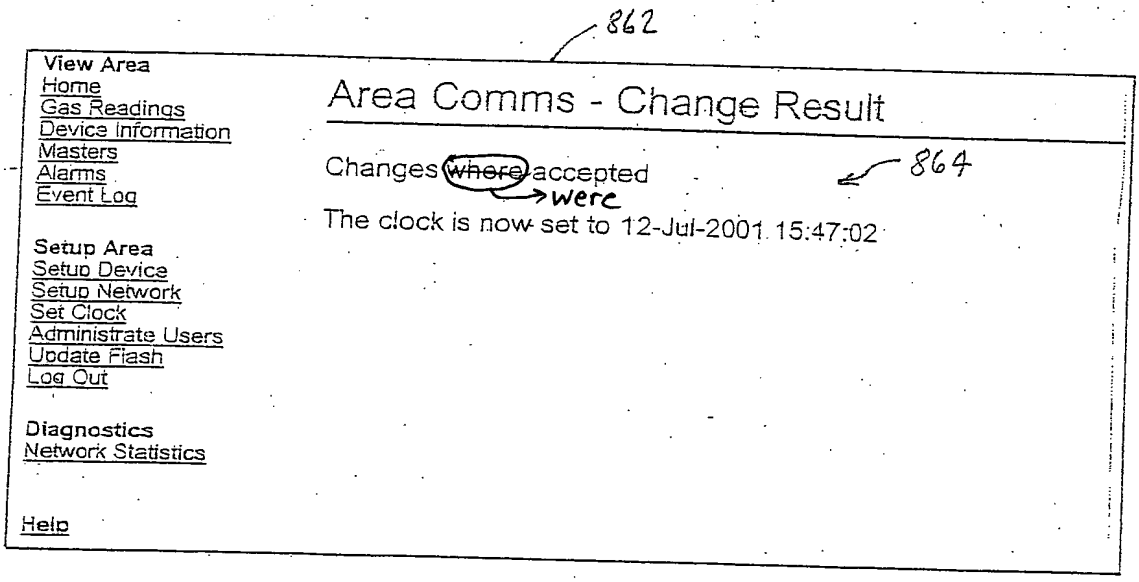


Fig. 56

AMENDED SHEET SHOWING CHANGES

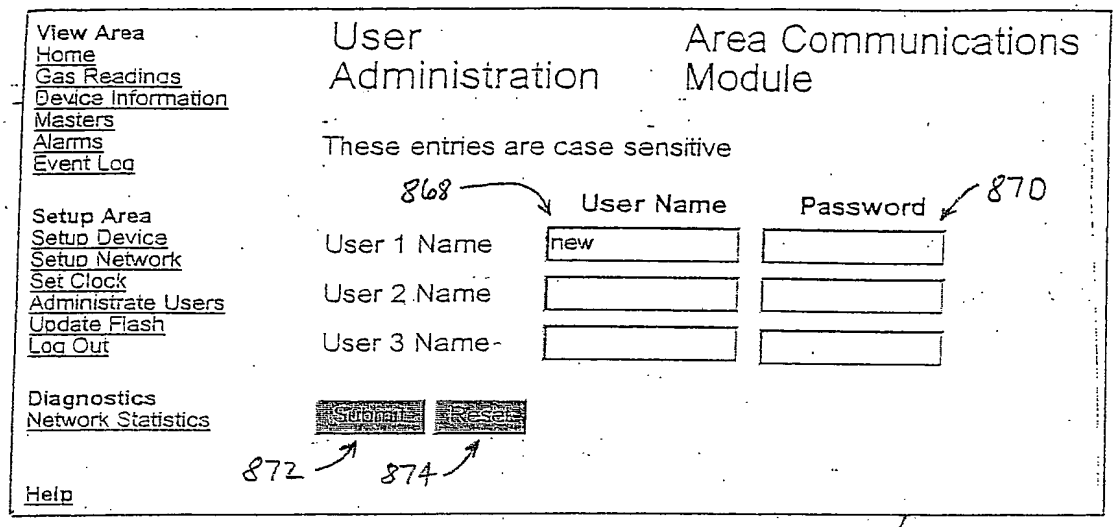


Fig. 57

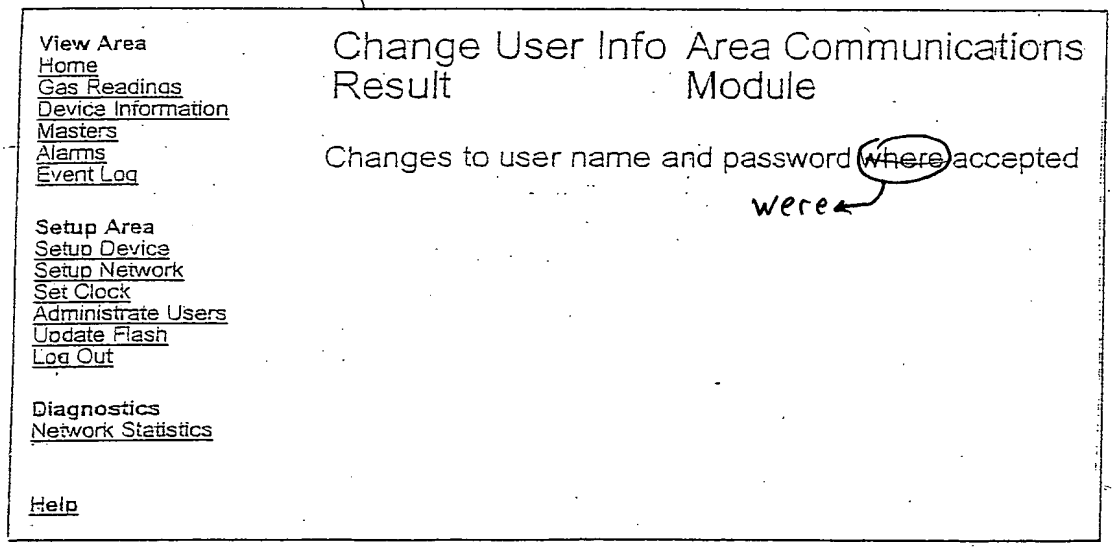


Fig. 58

FIG. 62E

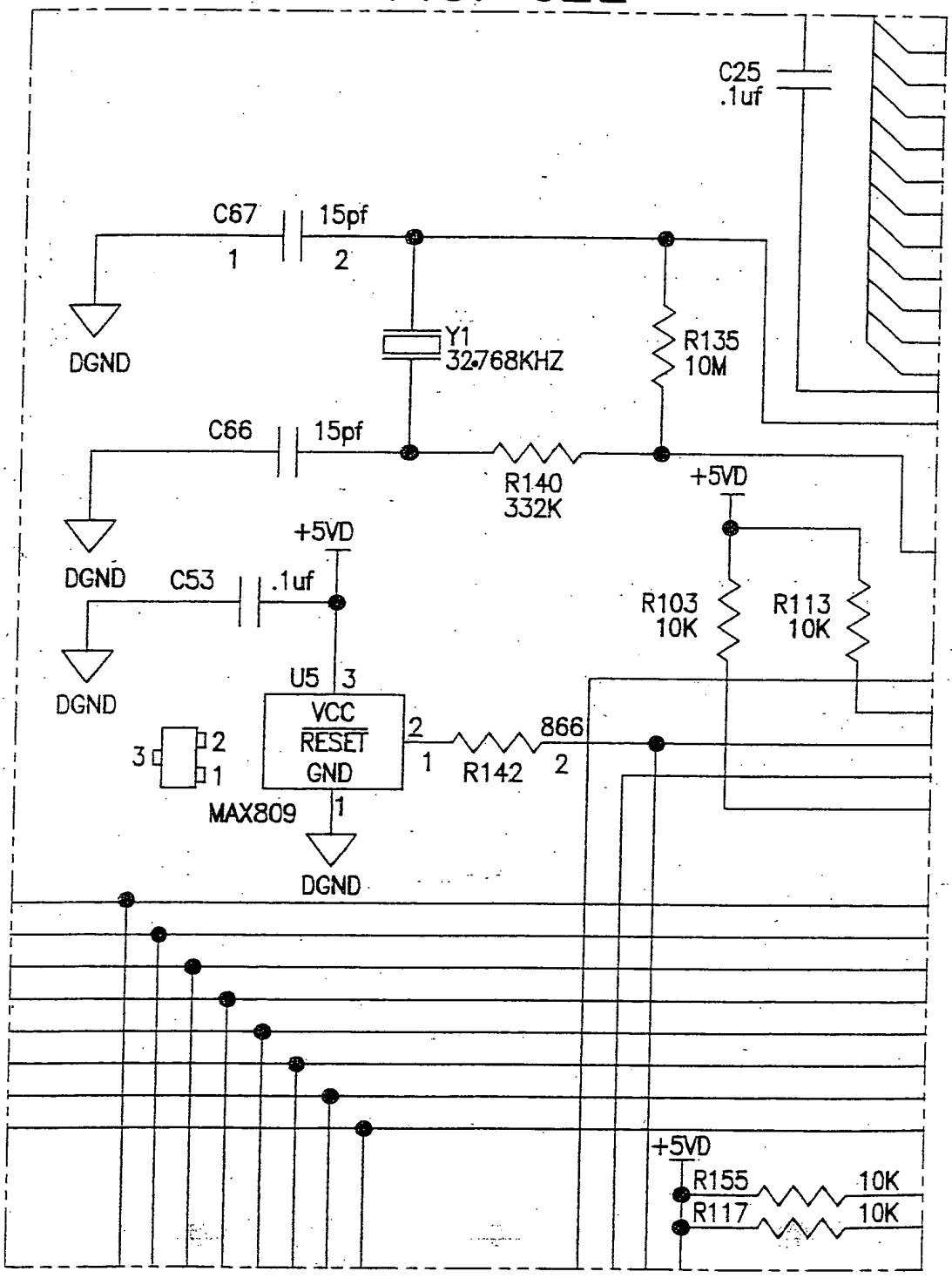


FIG. 62G

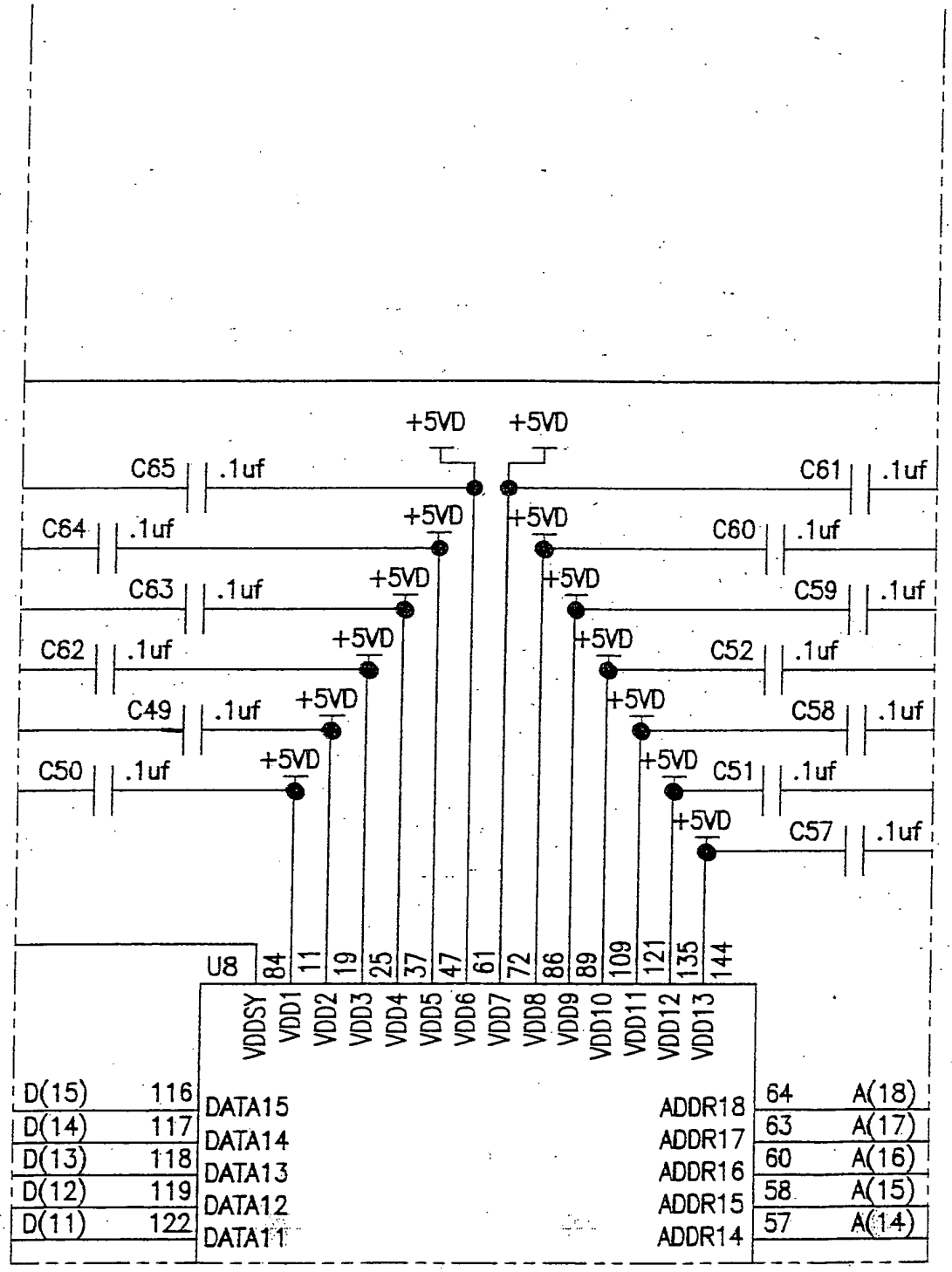


FIG. 62H

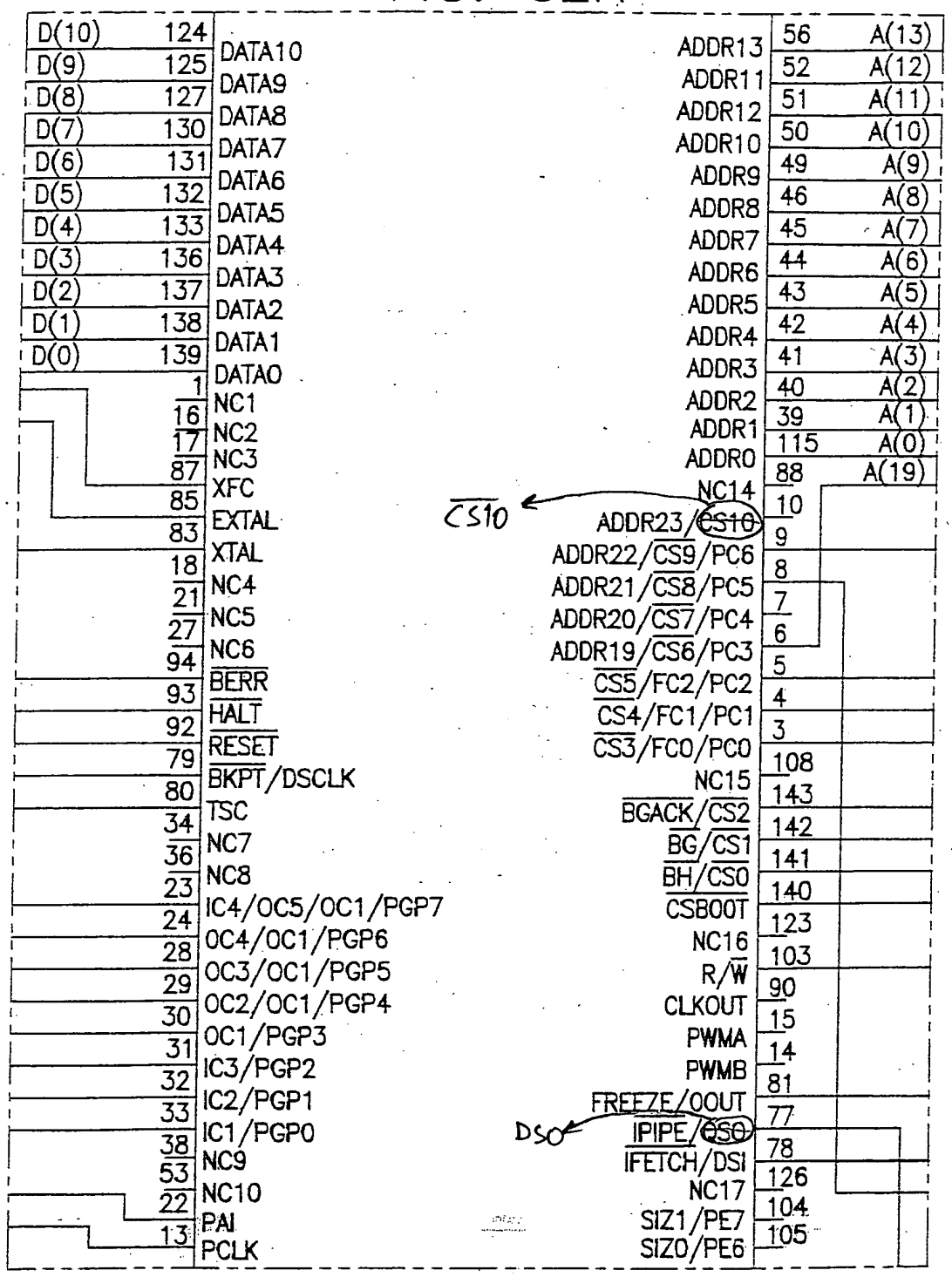


FIG. 621

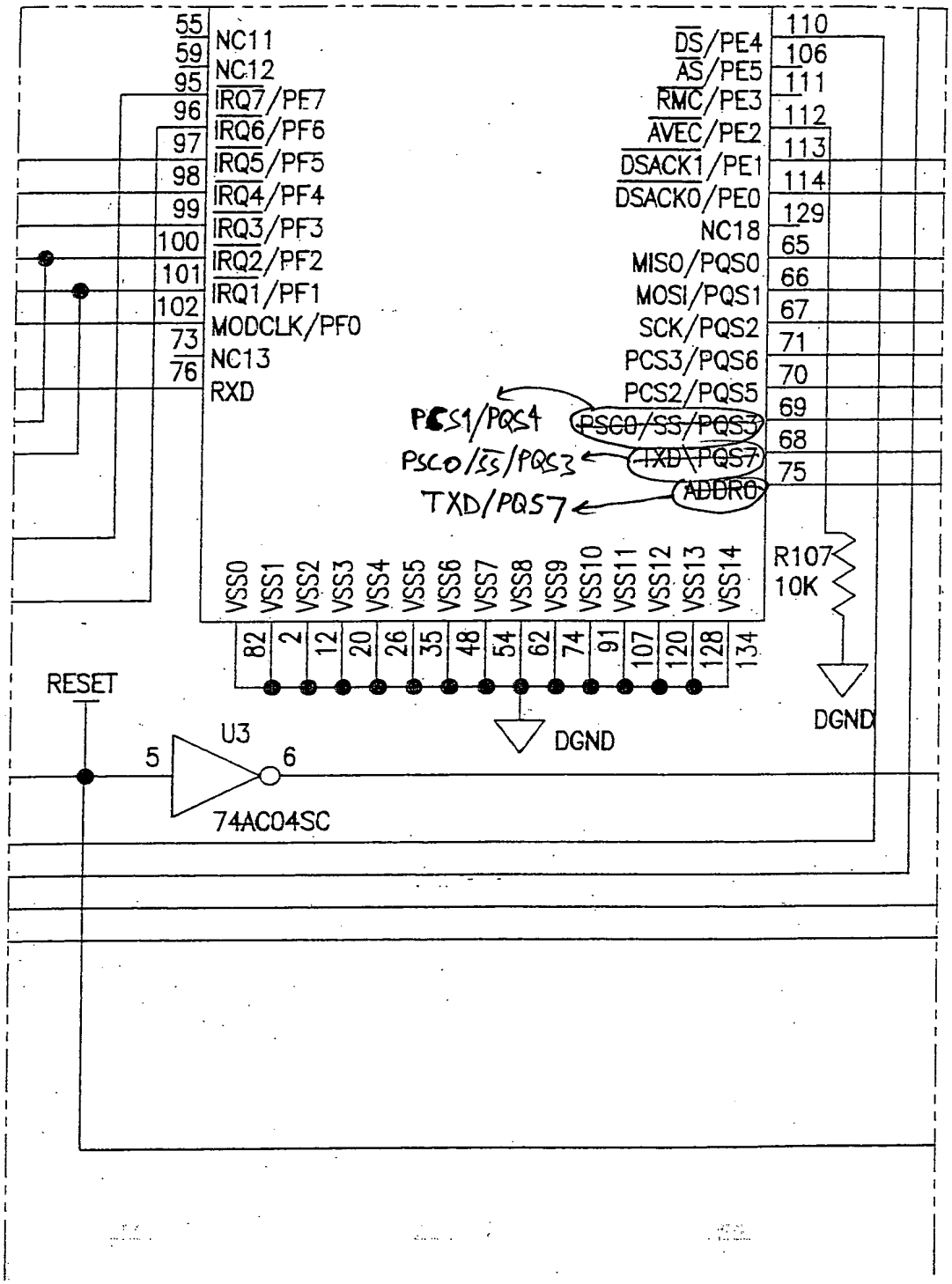


FIG. 63F

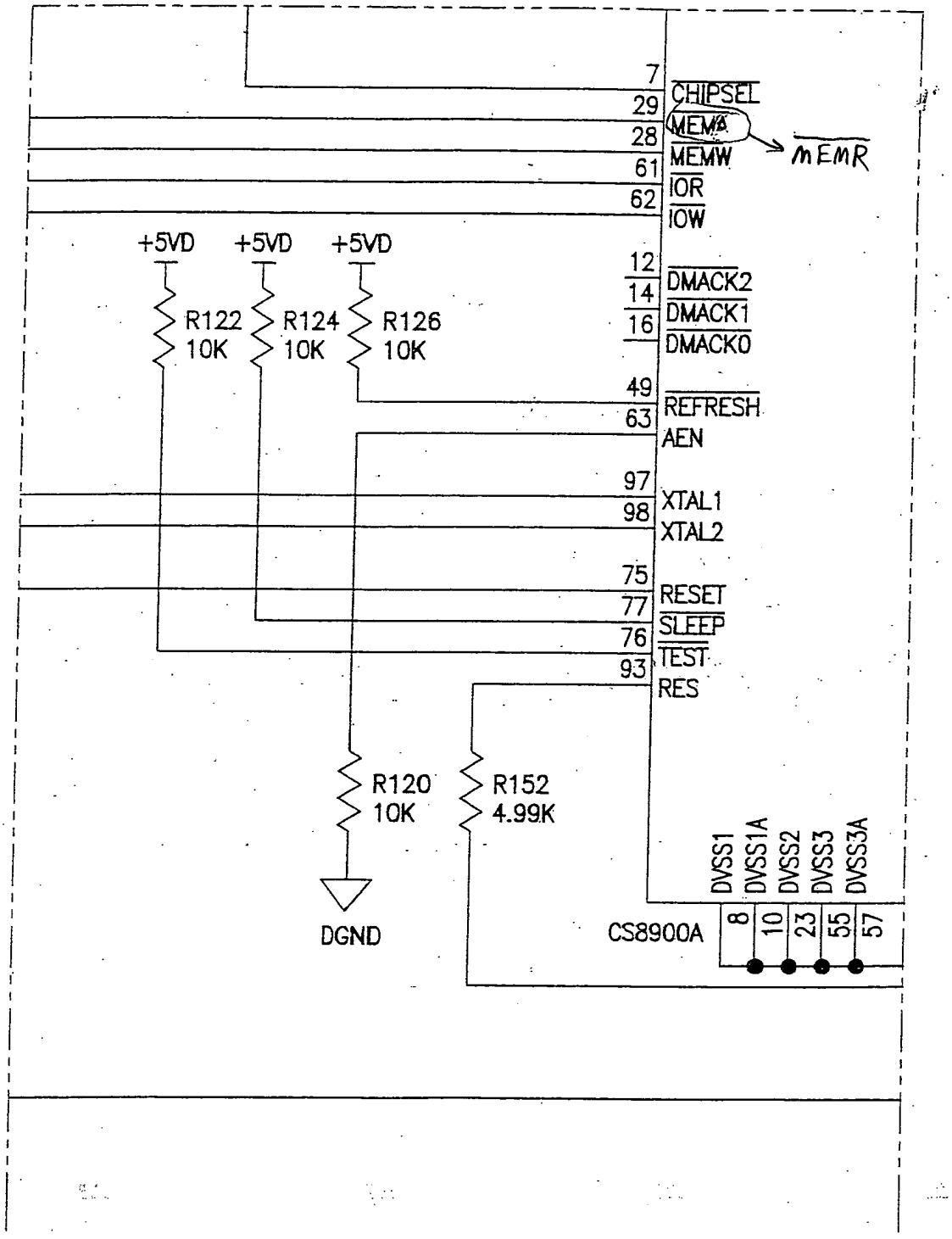


FIG. 62R

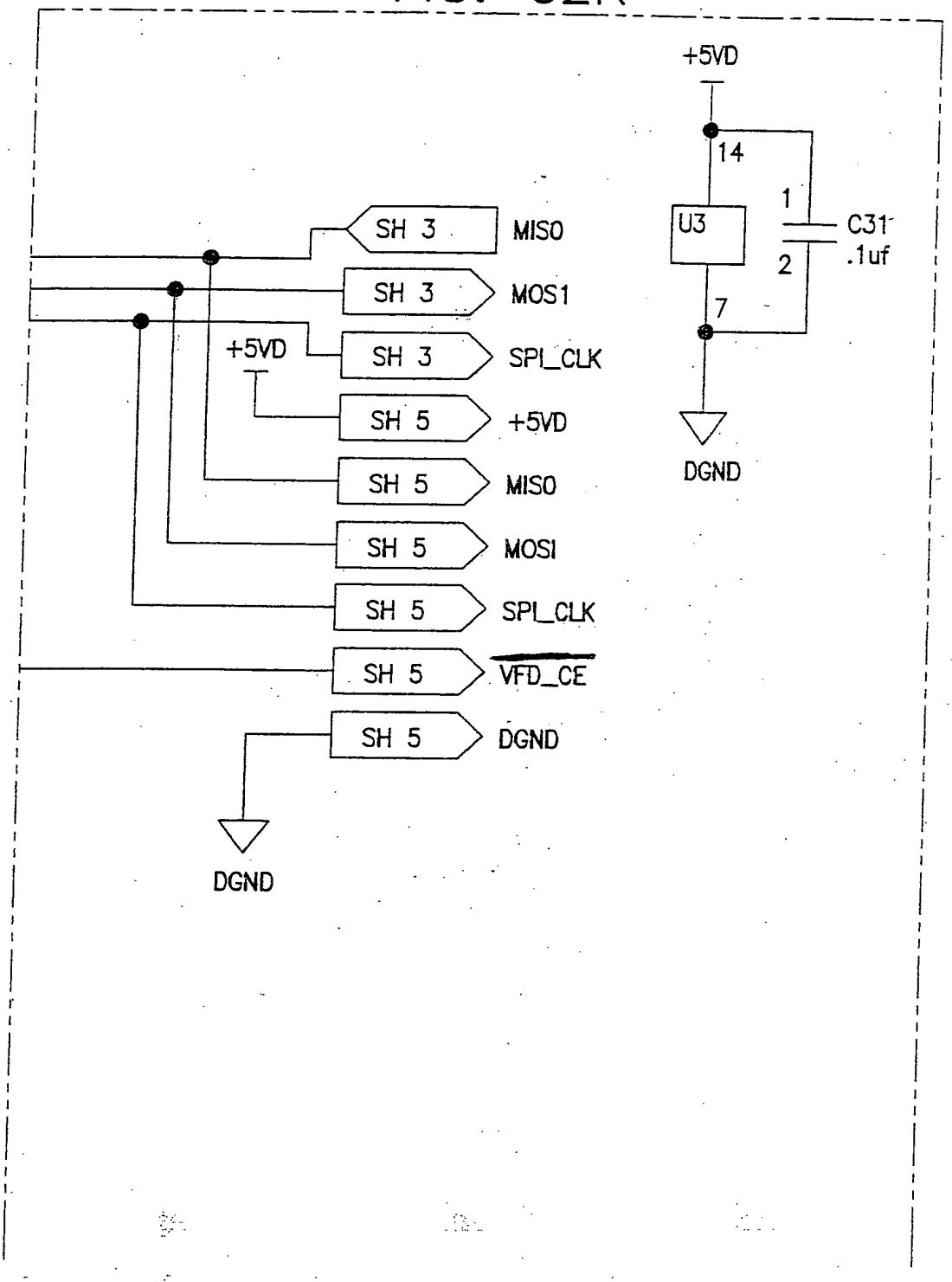
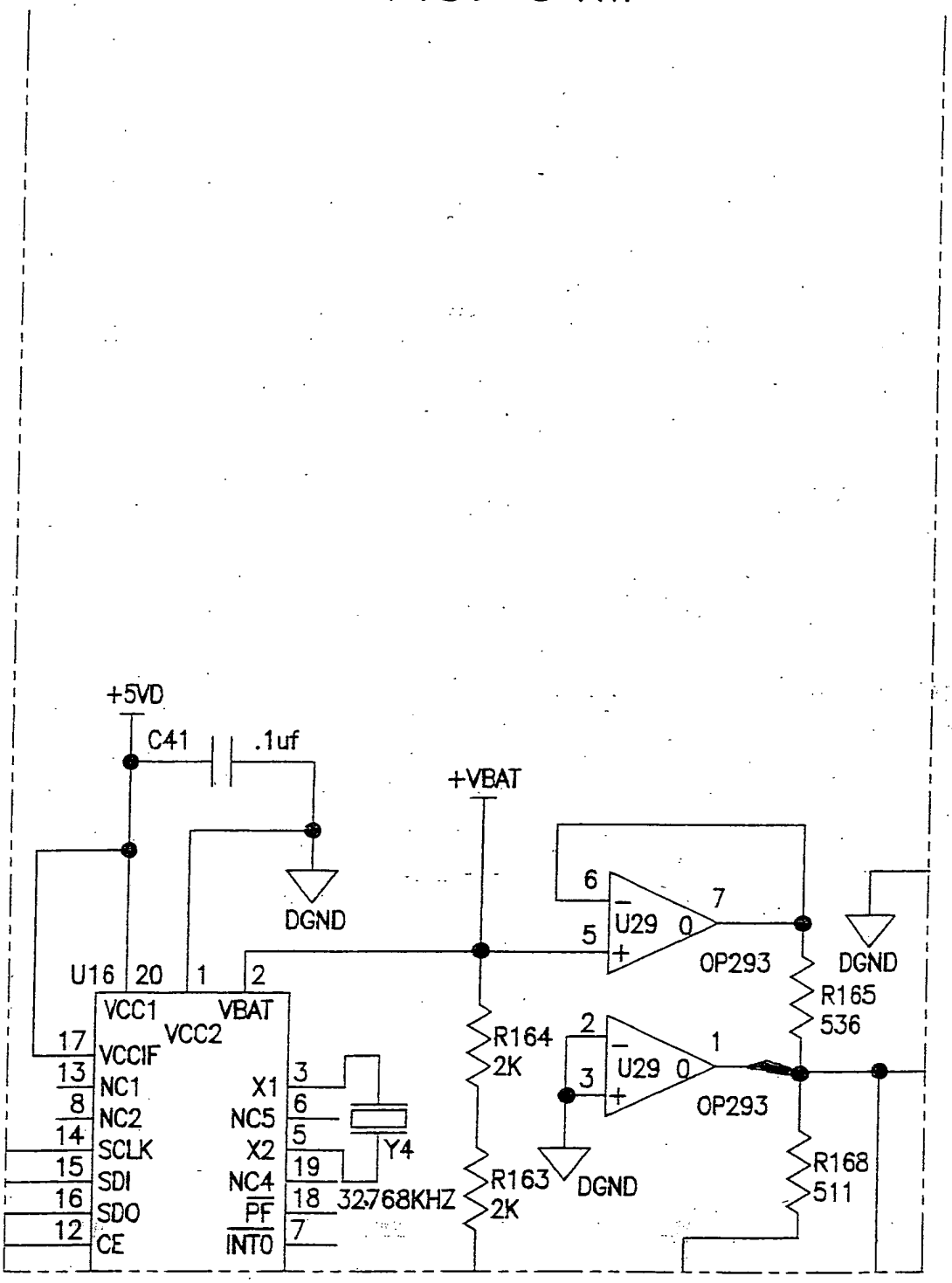


FIG. 64M



AMENDED SHEET SHOWING CHANGES

FIG. 66J